

5) Glyceryl trinitrate.

Note: if the patient has been on PDE5 Inhibitors (Viagra, Cialis, Levitra) in the last 24 hours, instead of GTN give Nifedipine 10mg sublingual or a crushed tablet under the tongue.

OR

Place a glyceryl trinitrate tablet (Anginine) under the tongue.

OR

Apply 5mg transdermal patch to chest and upper arm according to the manufacturer's instructions. Remove patch once BP settles or if the BP drops too low.

The hypotensive response should begin within 2 to 3 minutes and may last up to 30 minutes. A second spray/tablet may be given in 5 – 10 minutes if the reduction in the blood pressure is inadequate or if the blood pressure rises again.

Note: If glyceryl trinitrate is not available or is contraindicated (e.g. within 24 hours of sildenafil use), give one 10 mg nifedipine tablet (not a slow-release tablet) crushed, mixed with water and swallowed.

Avoid sildenafil (Viagra), vardenafil (Levitra) and tadalafil (Cialis) for at least 48 hours after a severe episode of autonomic dysreflexia

All recommendations are for people with a spinal cord injury at the 6th thoracic level or above. Individual therapeutic decisions must be made by combining these recommendations with clinical judgement.

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If glyceryl trinitrate or nifedipine do not lower the blood pressure sufficiently, the cause of the autonomic dysreflexia has not been identified, or you need advice.

please contact

Burwood Spinal Unit
Tel: 03 383 6850

**Auckland Spinal
Rehabilitation Unit**
Tel: 09 270 9070

for further advice
regarding management
or
arrange transport to the nearest
emergency department.

MEDICAL EMERGENCY CARD

Autonomic Dysreflexia

A hypertensive crisis in people with spinal cord injury at or above the 6th thoracic level.

Name

NHI

This person is susceptible to autonomic dysreflexia condition of reflex sympathetic overactivity which can cause extremely high blood pressure

THIS DEMANDS IMMEDIATE ACTION

WHAT IS AUTONOMIC DYSREFLEXIA?

This is a condition of **sudden high blood pressure**, which may continue to rise and may cause a brain haemorrhage or fits. The normal BP for this group of people is commonly 90/60 - 100/60mm Hg lying and lower when sitting. A BP of 130/90 mm Hg is therefore high for them. If untreated the BP can rapidly rise to extreme levels e.g. 220/140 mm Hg.

SYMPTOMS & SIGNS

The person may present with all or some of the following:

- Pounding headache, which gets worse as the blood pressure rises.
- Blurred vision
- Flushing and blotching of the skin above the level of the spinal cord injury.
- Profuse sweating
- Goose bumps.
- Chills without fever
- Bradycardia (slow pulse rate).
- Hypertension (high blood pressure)

COMMON CAUSES

- Bladder irritation e.g. distended bladder, urological procedure, urine infection
- Bowel irritation e.g. constipation. chemically irritant suppositories, digital dilatation.
- Skin irritation, e.g. pressure sore, ingrown toenail, burns.
- Other, e.g. contracting uterus, fractured bones, acute intra abdominal disease.

Patients and carers know about this condition and often can suggest the cause.

TREATMENT

Ask if the patient has just taken a drug to control the autonomic dysreflexia

Two people are required to control the situation.

- 1) Sit upright or elevate the head of the bed. Loosen clothes and remove compression stockings and abdominal binder.
- 2) If the person has an IDC or SPC
 - 1) Empty leg bag and estimate volume. To determine whether or not the bladder is empty, ask if the volume is reasonable considering fluid intake and output earlier that day.

- ii) Check that the catheter or tubing are not kinked or flow is not impaired by a blocked inlet to the leg bag or perished valve in the leg bag.

If the blood pressure > 170mm Hg systolic, start drug therapy (see 5)

- iii) If the catheter is blocked irrigate GENTLY with no more than 30 mls of sterile water. Drain the bladder slowly – 500 ml initially and 250 ml each 15 minutes afterwards to avoid a sudden drop in blood pressure.

If this is unsuccessful, recatheterise, using a generous amount of lubricant containing a local anaesthetic, e.g. 2% lignocaine jelly.

- iv) If the blood pressure falls after the bladder is emptied the person still requires close observation as the bladder can go into severe contractions causing hypertension to recur. Consider giving an oral anticholinergic medication, e.g. oxybutynin HCl.
- v) *Monitor the blood pressure for the next 4 hours.*

- 3) If the person does not have a permanent catheter:

If the bladder is distended, lubricate the urethra with a generous amount of local anaesthetic jelly, wait two minutes, then pass a catheter to empty the bladder. Drain the bladder slowly (see 2 iii).

- 4) If constipation is suspected, check the rectum for faecal loading:

If the rectum is full, check the blood pressure before attempting manual evacuation.

if it is more than 150 mm Hg systolic, start drug treatment (see 5).

Gently insert a generous amount of lignocaine jelly into the rectum and gently remove the faecal mass.

Note: if symptoms are aggravated, stop immediately.

IF NO RESPONSE. i.e. if the elevated blood pressure does not start to fall within 1 minute of the above procedures, or the cause (see opposite) cannot be determined, treat as follows.